EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	18601	(scenario or variables or events or circumstances or description or values or factors or conditions or parameter) with (chart or list or table) with (standard$8)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/02 12:19
L2	5668	(scenario or variables or events or circumstances or description or values or factors or conditions or parameter) with (chart or list or table) with (standard$8) and (health$9 or medical or sick$6 or wellness or disease or ill$6)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/02 12:21
L3	184	(scenario or variables or events or circumstances or description or values or factors or conditions or parameter) with (chart or list or table) with (standard$8) with (health$9 or medical or sick$6 or wellness or disease or ill$6)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/02 12:23
L4	43	(scenario or variables or events or circumstances or description or values or factors or conditions or parameter) with (chart or list or table) with (standard$8) with (health$9 or medical or sick$6 or wellness or disease or ill$6) and scenario	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/02 12:36
L5	43	(scenario or variables or events or circumstances or description or values or factors or conditions or parameter) with (chart or list or table) with (standard$8) with (health$9 or medical or sick$6 or wellness or disease or ill$6 or lifestyle or life near2 style) and scenario	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/02 15:03
L6	0	5 not 4	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/02 12:37
L7	1	"6804656".pn. and scenario	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/02 12:41

EAST Search History

L8	2	"6804656".pn. and (scenario or variables or events or circumstances or description or values or factors or conditions or parameter)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/02 12:42
L9	1	"6804656".pn. and (scenario or variables or events or circumstances or description or values or factors or conditions or parameter) and (chart or list or table)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/02 12:43
L10	1	"6804656".pn. and (scenario or variables or events or circumstances or description or values or factors or conditions or parameter) and (chart or list or table) and (standard$8) and (health$9 or medical or sick$6 or wellness or disease or ill$6 or lifestyle or life near2 style)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/02 12:44
L12	22	(scenario) with (standard$8) with (health$9 or medical or sick$6 or wellness or disease or ill$6 or lifestyle or life near2 style) and scenario	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/02 15:06
L13	1	"5509810".pn. and scenario and stor$8	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/02 16:34

EAST Search History

L14	64	(US-20020184056-$ or US-20040063082-$ or US-20030195772-$ or US-20030004788-$ or US-20010042004-$ or US-20060026036-$ or US-20050075908-$ or US-20020184067-$ or US-20020073005-$ or US-20010043599-$ or US-20010032099-$ or US-20010001852-$ or US-20030040850-$ or US-20020061505-$ or US-20020123027-$ or US-20020107704-$ or US-20030200128-$ or US-20060064030-$ or US-20010027794-$ or US-20040147816-$ or US-20060106734-$ or US-20020077849-$ or US-20010000810-$ or US-20020022551-$ or US-20010039503-$ or US-20040225200-$).did. or (US-20040215491-$ or US-20030027116-$ or US-20070027636-$).did. or (US-7024399-$ or US-6978244-$ or US-6701345-$ or US-6327570-$ or US-5632007-$ or US-6231344-$ or US-5839901-$ or US-5879163-$ or US-6290646-$ or US-6847940-$ or US-6067524-$ or US-6139494-$ or US-6652283-$ or US-6039688-$ or US-5937387-$ or US-6607483-$ or US-6553386-$ or US-6269339-$ or US-5207580-$ or US-7149700-$ or US-6936010-$ or US-6638232-$ or US-6330541-$ or US-6148228-$ or US-6041304-$ or US-6804656-$). did. or (US-5509810-$).did. or (EP-840127-$).did. or (US-20020184056-$ or US-20020107704-$ or AU-200022365-$ or US-20010027794-$ or EP-840127-$ or WO-200079466-$).did.	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2007/07/02 17:06
L15	47	14 and (target$6 or goal$9)	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2007/07/02 17:07

EAST Search History

L16	11	14 and (target$6 or goal$9) with life$9	US-PGPUB; USPAT; EPO; DERWENT	OR	ON	2007/07/02 17:07

Emergency Response, management and training

Practical applications and theoretical research concernir Emergency situations.

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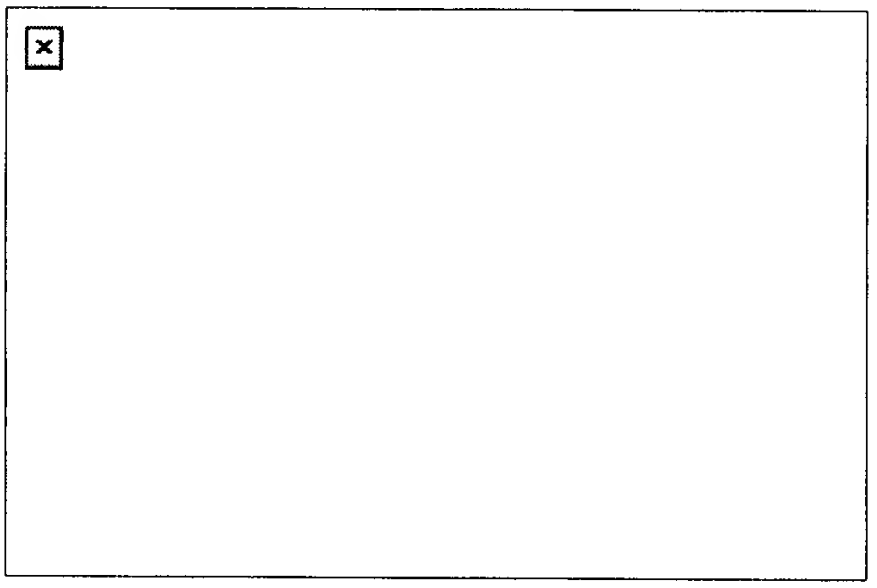
Research Topics

- **Robustness and complexity**

The notion of robustness has become a central issue in numerous scientific domains from biology and ecology through to politics and computing. Indeed, in such systems robustness may be considered as the defining factor in system survivability and is intrinsically linked to the crucial concepts of self-organisation and emergence which characterise complex systems.



Evacuation control area at the scene of the emergency.

On a practical level, in the domain of crisis management we strive to have a robust and efficient system. We would like to explore the theory and practices of robustness and examine the topic of how to design truly robust socio-technical crisis systems. Questions around this topic include: What characterises truly robust socio-technical crisis systems? What are the consequences, in terms of redundancy of information and cost, of having a robust system. What are the mechanisms and dynamics by which robustness is achieved? What is the relationship between robustness and regulation? How can we design and implement robust and resilient socio-technical crisis systems

- **Communication, cooperation and coordination**

Arguably the most important factors which determine the efficiency of an emergency rescue operation are intra and inter communication, cooperation and coordination. Through field studies we are interested in studying these factors in order to analyse how the introduction of new technology or how changes in work practices will impact the effciency and effectiveness of the emergency rescue. We are particularly interested in:

  - **Emotional aspects** - how emotions affect decision making and how we communicate
  - **Non-verbal communication** - how unconsiously performed gestures and para-verbal communication affect our interpretation of the message, how are such gestures recognised and interpreted, and what is the underlying

Tools

Experimentation in life-threathening situations such as emergency rescue is of infeasible. Simulation is a valuable tool which allows us to experiment safely situations. However, for it to be truly useful it must be based on a reasonably r model of the situation. The development and validation of our simulators (wh reality or multi-agent) as based on data collected from our field studies. Thus used to explore our research topics are:

- Multi-agent systems
- Field studies
- Virtual reality

Projects

- NETCRISE
- TELEDEC
- COSI - Complexity in Social Science
- Crisis Management & the Information Society

Papers

Dugdale, J., Pavard, B., Soubie, J.L. (2000) **"A Pragmatic Development of a Simulation of an Emergency Call Centre."** Designing Cooperative Systems in Artificial Intelligence and Applications. (Eds.) Rose Dieng et al. IOS Press.

Pavard, B. and Dugdale, J. (2000) **"The contribution of complexity theory t of socio-technical systems."** InterJournal of Complex Systems, 335. New En Complex Systems Institute, Cambridge, MA, USA.

El Jed, M., Pallamin, N., Dugdale, J., Pavard, B. (2004) **"Modelling characte in an interactive virtual environment.** In proceedings of AISB 2004 Sympo Motion, Emotion and Cognition. 29 March - 1 April 2004, Leeds, UK.

Darcy S., Dugdale J., El-Jed M., Pallamin N., Pavard B. (2003) **"Virtual Stor A methodology for developing believable communication skills in virtual** International Conference on Virtual Storytelling, Toulouse, France. Novembe 2003.

Pavard, B., Dugdale, J. (2002) **"From representation Intelligence to contex intelligence."** CASOS (Computational Analysis of Social and Organizational 2002, Pittsburgh, PA. USA. July 21-23.

Dugdale, J. Pavard, B., Soubie, J.L. (1999) **"Design Issues in the Simulation Emergency Call Centre."** In Proceedings of ESM 99 Modelling and Simulat European Simulation Multiconference. June 1-4, 1999. Warsaw, Poland.

purpose of these gestures.
  - **Formal versus informal organisation** - formalised procedures of communication, cooperation, and coordination are undoubtedly necessary and serve a crucial purpose, but yet we often find that informal means are equally if not more effective. Under what conditions do we switch from a formal to an informal organisation? Is there an ideal balance between these two modes of organisation? Can we design systems which exploit the benefits of both modes?

- **Design methods**

  The aim of this research is to develop software tools and methodologies in order to help design complex organisations. We particularly emphasize modelling the interplay between structured and self organised cooperative systems. Our objective is to be able to simulate the efficiency and robustness of such complex socio-technical systems.

- **Crisis management**

  Our research focuses on a micro analysis of collaborative processes at ground zero level and how proffessional people adjust their behaviour to unexpected situations. The aim of this analysis is to initiate a bottom-up process for the design of communication tools that enhance the efficiency of crisis management

Bellamine - Ben Saoud, N., Darcy, S., Dugdale, J., Pavard, B., Ben Ahmed, M **"Simulation multi-agents de situation de secours d'urgence."** In proceedin 10èmes Journees Francophones d'Informatique Medicale. Tunis 4 - 5 Septemt FRENCH]

Darcy, S., Dugdale, J., Pallamin, N., Pavard, B. (2002) **"Simulation en situat naturelle et réalité virtuelle : Deux approches complémentaires pour la cc systèmes coopératifs en situation d'urgence médicale."** In proceedings of E 2002 Ergonomie et Informatique Avancee. Biarritz, France. 8 - 10 October 20 FRENCH]

Dugdale, J., Pavard, B., Pallamin, N., El Jed, M. **"Emergency Fire Incident a Virtual World."** In Proceedings of the International workshop on Informati for Crisis Response and Management (ISCRAM 2004). 3-4 May 2004.

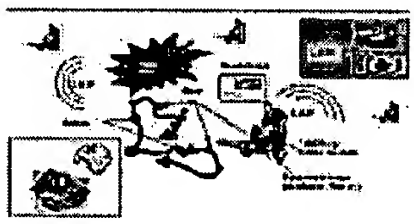
Bellamine-Ben Saoud, N., Dugdale, J., Pavard, B., Ben Ahmed, M. **"Toward for Emergency Activities in Large -Scale Accidents: An Interactive and C Agent-Based simulator.** In Proceedings of the International workshop on Inf Systems for Crisis Response and Management (ISCRAM 2004). 3-4 May 200

Darcy, S., Dugdale, J., Pavard, B. (2003) **"NETcrise : local network for em situations.** COSI Summer School, Baeza, Spain.

Darcy, S., Dugdale, J., El-Jed, M., Pallamin. N., Pavard, B. (2003) **"Virtual r training environment for the management of cooperative emergency situ** COSI Summer School, Baeza, Spain.

Agent based simulation Demonstation

A JADE computer simulation of emergency rescue. Modeling and Simula Emergency activities on a big accident site . *Narjes Bellamine Ben-Saoud.*



Representation of the accident site.

Other Information

Leaflet of our activities in emergency response, management and training

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GRIC members

Bernard Pavard, Julie Dugdale, Nico Pallamin, Sandrine Darcy, Mehdi El-Jed Morales Rodriguez

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Useful Links

- ISCRAM - International Community on Information systems for Crisis Mana
- RoboCupRescue Scenario.
- Service Coordination for Emergency Response Working Group of Agentc